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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/625,527

07/24/2003

Yoshinori Yoshida

Q76642

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SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

DESAI, ANISH P

ART UNIT

PAPER NUMBER

1794

NOTIFICATION DATE

DELIVERY MODE

11/06/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTO@SUGHRUE.COM
PPROCESSING@SUGHRUE.COM

Office Action Summary	Application No. 10/625,527	Applicant(s) YOSHIDA ET AL.	
	Examiner ANISH DESAI	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07/02/09.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01/28/09,09/30/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's arguments in response to the Office action dated 03/02/09 have been fully considered.
2. The 35 USC Section 112-second paragraph rejections as set forth in the previous Office action are withdrawn in view of applicant's amendment.
3. In view of applicant's amendment, a new 35 USC Section 112-first paragraph rejections are made. Additionally, in view of applicant's amendment, new claim objections are made.
4. The art rejections are maintained.

Claim Objections

5. **Claim 5 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.**
6. Claim 5 recites "acrylic monomer", this limitation is already presented in claim 4. As such, claim 5 fails to further limit the subject matter of a previous claim.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. **Claims 1, 2, 4-8, and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.**

8. The newly amended claim 1 recites "wherein the urethane polymer and an acrylic polymer are present as individual components **and/or** are bonded together". This can be interpreted as the urethane polymer and the acrylic polymer are present as individual components **and** bonded together. However, the specification fails to provide support for the urethane polymer and the acrylic polymer are present as individual components **and** bonded together. Additionally, the specification as originally filled fails to provide support for requiring the urethane polymer and the acrylic polymer to be present individually. Further, there is no support to recite the urethane polymer and acrylic polymers are **bonded together**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 2, 4-8, and 10 are rejected under 35 U.S.C. 103(a) as obvious over Barrera (US 5,965,256) in view of Rogers Jr. (US 3,642,567).

10. Regarding claim 1 and claim 5, Barrera discloses a multi-layered film disposed on a substrate. The multi-layered film of Barrera comprises an interpenetrating polymer networks (IPN) layer, preferably acrylate-urethane IPN. The IPN layer of Barrera's invention is prepared by simultaneous thermal cure of a mixture of acrylate monomer(s) via free-radical polymerization and urethane precursors, namely polyisocyanate and polyfunctional alcohols, via condensation polymerization (column 8, lines 14-19 and column 12, lines 55-67).

11. Further, Barrera teaches a method of forming the multi-layered film (protective film) wherein the method comprises steps of (a) coating or otherwise depositing a layer comprising IPN film precursors onto a cured adhesive film; (b) coating or otherwise depositing a fluoro-containing topcoat layer onto the curable IPN film precursor, wherein the fluoro-containing topcoat layer is selected from the group consisting of a cured fluoropolymer and energy curable fluoropolymer precursor; and (c) applying at least one

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heat and light energy to the construction to cure the curable IPN film precursors and the energy-curable fluoropolymer precursor (column 3, lines 60-67 and column 4, lines 1-3). Further the adhesive used in the invention of Barrera is a pressure-sensitive adhesive (PSA) (column 5, line 65).

12. The urethane-acrylate IPN layer of Barrera is equated to a composite film. Additionally, the fluoro-containing topcoat layer is equated to a first film. The structure of the multilayered film of Barrera is fluoro-containing topcoat layer/IPN layer/PSA layer, which reads on the claimed structure of first film/composite film/PSA layer as presently claimed.

13. With respect to claim 1 requirement “wherein the urethane polymer and an acrylic polymer are present as individual components”, Barrera at column 8 lines 9-11 discloses “preferably, the central film layer comprises an interpenetrating polymer network (IPN) comprising one or more acrylate polymer and one or more urethane polymers...”. This disclosure meets aforementioned claim requirement. Further, with respect to claim 1 requirement “wherein the urethane polymer and an acrylic polymer...are **bonded together**”, it is submitted that applicant has not specified how urethane polymer and acrylate polymer are bonded together. Thus, Barrera’s IPN layer comprising urethane polymer and acrylic polymer is interpreted to meet on claim requirement of urethane polymer and acrylate polymer are bonded together.

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14. With regards to claim 1, the difference between the claimed invention and Barrera is that Barrera is silent as to teaching of "wherein the first film is made of at least one resin selected from the group consisting of polyethylene terephthalate...and polycarbonate resins."

15. However, Rogers discloses a novel composite article such as automobiles, trucks etc. that is protected from the forces of nature and manmade hazards during exposure to outdoor weather. The article of Rogers includes a weather resistant film adhered to the surface of the article using an adhesive (abstract and column 1 lines 5-40). Further, at column 2 lines 40-45, Rogers discloses suitable weather resistant films such as that of Applicant's preferred PVC, polypropylene, polycarbonate, and polyesters such as PET, where polyethylene and ethylene copolymer films are preferred.

16. It is noted that the first film of the primary reference of Barrera is formed of fluoro-containing polymers. Additionally, the protective films of Barrera can be used on vehicle surfaces such as aircraft, boats, trucks, and the like (column 15 lines 20-25). The secondary reference of Rogers is useful in protecting surface of articles such as automobiles from harsh weather using weather-resistant films that are formed of applicant's preferred first film resins.

17. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the weather-resistant film formed from resins

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such as that of disclosed by Rogers which reads on applicant's first film resins, and use it in the invention of Barrera, because selecting a known material based on its suitability for its intended use establishes a *prima facie* case of obviousness.

18. Given that Barrera as modified by Rogers teaches what has been set forth above, it is submitted that the properties of the PSA sheet having a modulus of 9 N/mm^2 or more and 250 N/mm^2 or less when an oblong piece of the PSA sheet with a width of 20 mm is bent at a radius of curvature of 3.0 mm (claim 1), the PSA sheet has a modulus of 15 N/mm^2 or more and 250 N/mm^2 or less when an oblong piece of the PSA sheet with a width of 20 mm is bent at a radius of curvature of 3.0 mm (claim 2), the composite film has a storage modulus of at 25°C of less than $2.0 \times 10^8 \text{ Pa}$ and a storage modulus at 100°C of $3.0 \times 10^5 \text{ Pa}$ or more (claim 6), wherein the first film has a storage modulus at 25°C of $2.0 \times 10^8 \text{ Pa}$ or more, would be present in the invention of Barrera as modified by Rogers.

19. The support for the Examiner's position is based on the fact that the PSA sheets of both inventions i.e. that of applicant and Barrera as modified by Rogers comprise a first film having a material different from the composite film/composite film comprising a urethane polymer and acrylic polymer/PSA layer. Further, the first film of Barrera as modified by Rogers contains resins such as polyethylene. The inventions of Barrera as modified by Rogers and that of applicant are structurally and compositionally equivalent.

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Therefore, the presently claimed properties would have been present. The burden is upon the Applicant to prove it otherwise (see *In re Fitzgerald* 205 USPQ 594).

20. With regards to claim 4, the recitation "composite film comprises a film obtained by reacting a polyol and a polyisocyanate...coating to cure it" is directed to product by process limitation. The products by process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. "Even though product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985).

21. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983).

22. Further, as previously noted, the IPN layer of Barrera is formed of acrylate-urethane IPN (column 1, lines 9-10). Additionally, the process for forming the IPN layer (composite film) of Barrera as set forth in column 12 lines 55-67 appears to be similar to

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that of the presently claimed invention. As such, the end product (i.e. composite film) of Barrera is similar to that of the presently claimed invention.

23. With regards to claims 8 and 10, Barrera discloses the first film having a thickness 0.025 mm (column 20, line 66), which converts to 25 μm (1 mm = 1,000 μm). This disclosure of Barrera meets the claim limitation of the first film has a thickness (t1) of 10 μm or more and 200 μm or less (and ratio of thickness) as claimed in claims 8 and 10. Additionally, Barrera discloses the composite film having a thickness of 0.1 mm (column 18, line 45), which converts to 100 μm . This disclosure of Barrera meets the claim limitation of the composite film has a thickness (t2) of 10 μm or more and 300 μm or less as claimed in claims 8 and 10.

Response to Arguments

24. Applicant's arguments received on 07/02/09 have been fully considered but they are not found persuasive.

25. On page 6-7 of the amendment, applicant argues that it would not have been obvious to select Rogers' film formed from resin such as PET, PE, PP and use it in the top coat layer of Barrera. Additionally, applicant provides rationale as to why one would not select films of Roger's invention and use it in the top coat layer of Barrera.

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26. The Examiner respectfully disagrees. It is submitted that Barrera at column 5 lines 5-10 discloses that when the IPN layer and the fluoro-containing polymer layer are present, the fluoro-containing polymer layer comprises the outermost layer (top coat). In the invention of Roger, the weather resistant film that is coated with an adhesive likewise forms the outermost layer since this weather resistant film protects the underlying substrates (column 2 lines 30-35, column 2 lines 40-45, and column 2 lines 55-60). Hence, regardless of their placement in the composite (i.e. be next to the IPN layer in Barrera or next to the adhesive layer in Roger), in the end product, the top coat layer of Barrera and the weather resistant film of Roger function to protect the underlying substrate. Additionally, it is noted that the protective films of Barrera can be used on vehicle surfaces such as aircraft, boats, trucks, and the like (column 15 lines 20-25). The secondary reference of Rogers is useful in protecting surface of articles such as automobiles from harsh weather using weather-resistant films that are formed of applicant's preferred first film resins.

27. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the weather-resistant film formed from resins such as that of disclosed by Rogers which reads on applicant's first film resins, and use it in the invention of Barrera, because selecting a known material based on its suitability for its intended use establishes a *prima facie* case of obviousness. Accordingly, applicant's arguments are not found persuasive and the art rejections are sustained.

Conclusion

28. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

29. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH DESAI whose telephone number is (571)272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

31. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

32. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. D./

Examiner, Art Unit 1794

/Callie E. Shosho/

Supervisory Patent Examiner, Art Unit 1794